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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/653,169 09/01/00 SAKAMOTO

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EXAMINER

PM82/1024

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ART UNIT

PAPER NUMBER

3618

DATE MAILED:

10/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/653,169

Applicant(s)
SAKAMOTO, ET AL

Examiner
Bryan Fischmann

Art Unit
3618



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 1, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to:
- 8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Sep 1, 2000 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 20) ☐ Other: _____

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Election/Restriction

1. Paper number 5 required a species election between eight species. Applicant timely traversed the restriction (election) requirement in Paper No. 6.

No claims are withdrawn as a result of this election, as all original claims are “readable” on elected species “A” of paper 5. The election was made to preclude the possibility of further independent claims being presented at a later date readable on the other species.

Specification

2. The disclosure is objected to because of the following:

A) The following recited phrases are unclear, awkwardly worded, and/or grammatically incorrect:

Note: The specification is considered replete with awkward and unclear wording. Due to this, the following may not be a comprehensive listing. It is requested Applicant thoroughly review the specification for awkward and unclear wording and incorrect grammar.

1) unclear - line 9 of sheet 1, line 3 of sheet 2, line 18 of sheet 2, line 8 of sheet 3, line 12 of sheet 4, lines 19 and 21 of sheet 4, lines 27 and 28 of sheet 4, lines 6-8 of sheet 6, lines 21 and 22 of sheet 13, lines 16-28 of sheet 14 (push-start) - see also line 4 of sheet 15 and lines 15 and 26 of sheet 16, line 8 of sheet 15, line 28 of sheet 17, lines 20 and 25 of sheet 20, line 16 of sheet 22, lines 11 (first speed), 16-19, 22 and 23 of sheet 23, lines 3 and 4 of sheet 24 (third speed) and lines 5 and 6 of sheet 29

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2) awkward - line 13 of sheet 1, line 9 of sheet 2, line 23 of sheet 2, lines 1-4 of sheet 4, lines 3 and 18 of sheet 5, 3 and 4 of sheet 6, lines 13-15 of sheet 14 (redundant), line 15 of sheet 15, lines 14 and 15 of sheet 17, lines 13, 15 and 16 of sheet 18, lines 13, 18 and 24 of sheet 19, line 10 of sheet 20, lines 5-9, 16 and 25 of sheet 21, line 28 of sheet 23 and lines 7 and 25 of sheet 34

3) grammatically incorrect or spelling error - lines 18 and 19 of sheet 3, line 26 of sheet 8, line 13 of sheet 9, line 7 of sheet 10, line 21 of sheet 27, line 18 of sheet 28, line 1 of sheet 29, line 4 of sheet 30 (hyphen), lines 13 (capital "T"), 14 and 27 of sheet 30 and lines 12, 14 and 20 of sheet 32 (capital "T")

B) The following inconsistencies in nomenclature were noted:

1) Lines 13, 14, 16 and 17 of sheet 8 recites "high speed drive gear 5". Line 26 of sheet 8 recites "transmission input shaft 5".

2) Line 9 of sheet 10 and line 16 of sheet 23 recites "high speed driven gear 15". Line 10 of sheet 23 recites "middle speed driven gear 15".

To avoid confusion to the reader, and to facilitate identifying components by nomenclature in the claims, it is requested Applicant use consistent nomenclature for the same reference number throughout the specification.

C) Line 23 of sheet 17 recites "drive motor No. 8". This recited phrase is believed to be intended to read "drive mode No. 8". Compare to line 6 of sheet 20.

See also line 22 of sheet 18 for similar wording.

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D) Lines 17 of sheet 32-line 6 of sheet 33 recites "Figure 11 is a schematic view of...input shaft 4...". Figure 11 fails to illustrate reference number 4.

Information Disclosure Statement

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Note that the Applicant refers to a foreign patent on sheets 1 and 2. While this is acceptable, the Applicant should not necessarily conclude that this reference has been considered by the Examiner. While US Patents are readily available to the Examiner, foreign patents are generally more difficult to obtain.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: 8b (sheet 24).

Correction is required.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference signs not mentioned in the description:

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12, 20 and 200 - Figures 1-5 and 11

“A” - Figures 2-4

9b - Figure 5

805-807, 814-818 and 859 - Figure 7

902, 903, 906, 907, 916-918, 920, 923, 950, 951, 953-959, 963 and 966 - Figure 8

1061 and 2004 - Figure 9

all reference numbers - Figure 10

Correction is required.

Claim Objections

6. Claim 2 is objected to because of the following:

A) Claim 2 recites “...a gear having a minimum gear change ratio...”. This wording is considered somewhat awkward and unclear. Preferred wording would be: “a gear having the largest diameter (or most teeth) on the transmission output shaft”, or similar.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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8. Claims 3, 4, 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

A) Claim 3 recites "...wherein a rotation of an output shaft of said electric rotary machine is reduced and transmitted to an engine side input shaft...".

The output shaft of the electric rotary machine is reference number 10.

It is best understood that the output shaft rotation, or output shaft RPM is controlled only by the motor (11) when the motor is functioning as a motor, as opposed to a generator. There is no known discussion in the specification concerning this "reduction".

It is believed that the Applicant is trying to convey in the above recitation the fact that the motor generator output shaft (10) drive gear (8) has a smaller diameter than the transmission input shaft (4) input shaft driven gear (7), which results in gear 7 being driven at a lower RPM than mating gear 8.

B) Claim 4 recites "...wherein the output shafts of said engine and said electric rotary machine are provided separately and gears respectively mounted on said two shafts...directly engage with each other...".

The output shaft of the electric rotary machine is reference number 10. The output shaft of the engine is reference number 2 (see lines 20 and 21 of sheet 10).

The drawing figures illustrate no gears on the engine output shaft (2).

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Note that reference number 4 is designated by the specification as the "transmission input shaft".

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 2, 5 and 8, as best understood (claim 2), are rejected under 35 U.S.C. 102(b) as being anticipated by Tabata, et al, US Patent 5,873,426.

Tabata teaches a power transmission apparatus of motor vehicles comprising:

an engine (12);

a gear change apparatus (16) provided between said engine and vehicle drive shaft (19);

an electric rotary machine (14) connected to an output shaft of said engine and said vehicle drive shaft via said gear change apparatus (Figure 1); and

a clutch (CE₁) provided between an input shaft (connected to 30) and an output shaft (26) of said gear change apparatus and adjusting a transmission torque between said input shaft and said output shaft (by influencing RPM of output shaft depending on clutch setting).

Regarding claim 2, note that the ring gear (16_r) on which the clutch is mounted has a larger diameter than the mating gear (16_s).

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Regarding claims 5 and 8, see clutch CE₂.

11. Claims 3, 4 and 7, as best understood, is rejected under 35 U.S.C. 102(b) as being anticipated by Kriegler, et al, US Patent 5,492,189.

Kriegler teaches a power transmission apparatus of motor vehicles comprising:

an engine (A₁);

a gear change apparatus (see sketch next page) provided between said engine and vehicle drive shaft (3);

an electric rotary machine (see sketch next page and lines 38 and 39 of column 3 of Kriegler) connected to an output shaft (1) of said engine and said vehicle drive shaft via said gear change apparatus (Figure 1);

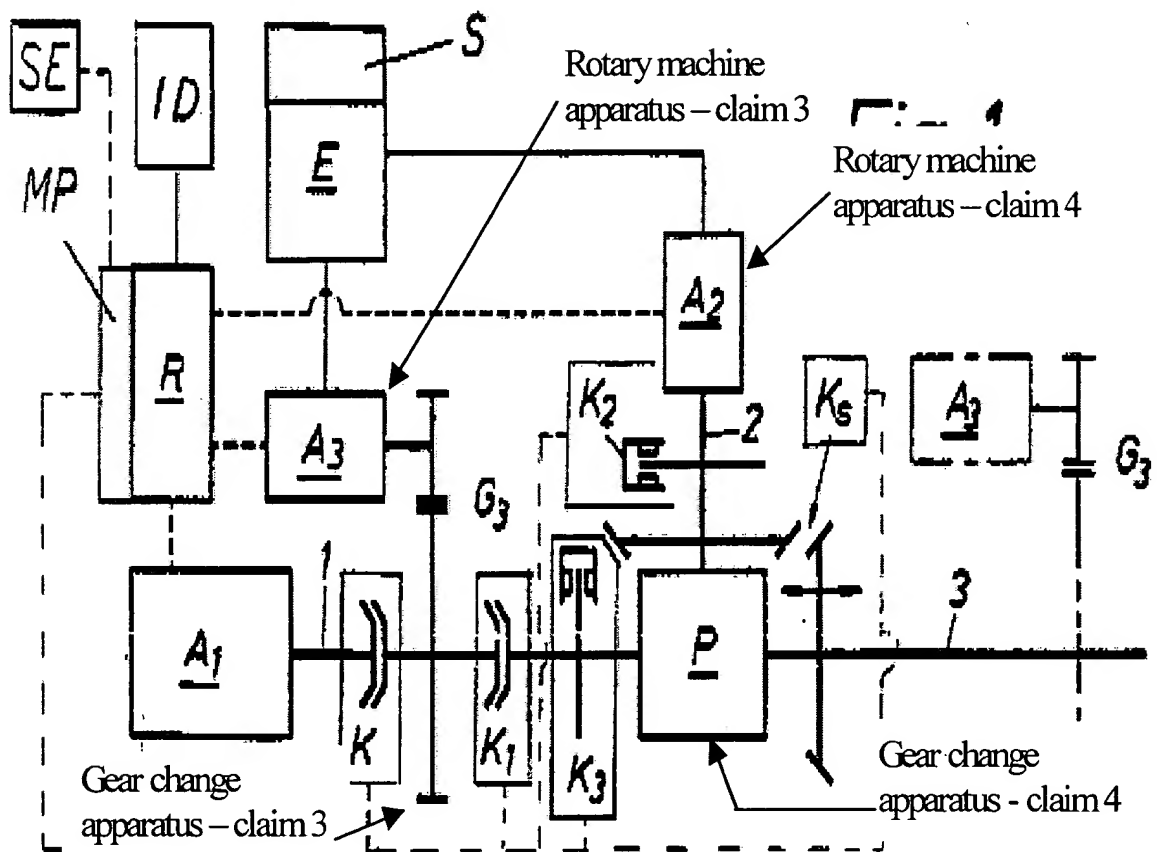
wherein a gear connected to the output shaft of said electric rotary machine meshes with a larger diameter gear in an engine side input shaft of said gear change apparatus (claim 3 - see sketch next page); and

wherein the output shafts of said engine and said electric rotary machine are provided separately (claim 4 - see Figure 1), and;

gears respectively mounted on said two shafts for transmitting the power of the output shaft of said engine and the output shaft of said electric rotary machine directly engage with each other (claim 4 - see sketch below and Figures 1 and 2 of Kriegler, noting that there is a "bevel"

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gear associated with P and connected with K₃ not illustrated on Figure 1, but illustrated on Figure 2.



Regarding claim 7, see clutch K₂.

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Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kriegler, et al, US Patent 5,492,189, in view of Tabata, et al, US Patent 6,093,974.

Kriegler fails to teach a clutch on the electric rotary machine output shaft.

However, Tabata teaches a power transmission apparatus of a motor vehicle comprising a clutch (32) on an output shaft of an electric rotary machine (3). A clutch on the output shaft of an electric rotary machine is advantageous in that the electric rotary machine may be uncoupled from the engine in the event of a casualty to the electric rotary machine.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a clutch on the output shaft of the electric rotary machine of Kriegler, as taught by Tabata.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) Schmidt (2 patents) - teaches hybrid power transmission apparatus

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B) Mоторo, et al (2 patents) - teaches hybrid power transmission apparatus

C) Hara, et al - teaches hybrid power transmission apparatus

D) Omote, et al - teaches hybrid power transmission apparatus

E) Mikami, et al - teaches hybrid power transmission apparatus

F) Taniguchi, et al - teaches hybrid power transmission apparatus

G) Stemler, et al - teaches hybrid power transmission apparatus

H) Hanyu, et al - teaches hybrid power transmission apparatus

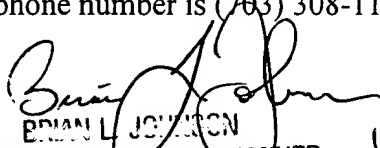
15. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bryan Fischmann whose telephone number is (703) 306-5955. The examiner can normally be reached on Monday through Friday from 7:30 to 4:00.

If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, Brian Johnson, can be reached on (703) 308-0885. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

BF

10/21/01


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